

What is claimed is:

1. A method for ensuring that a client computer on a computer network is properly configured for real-time communication, the method comprising:

monitoring a database of the network, wherein the database comprises

5 configuration settings that client computers on the network required to engage in real-time communication over the network;

receiving, from the client computer, a request to be notified whenever there is a change in the required configuration settings;

detecting that a change has occurred in the required configuration settings,

10 wherein the change results in new required configuration settings; and

transmitting the new required configuration settings to the client computer.

2. A computer readable medium having stored thereon computer

executable instructions for performing the method of claim 1.

15

3. The method of claim 1 wherein the receiving step comprises:

receiving a subscribe message formatted according to a session initiation

protocol;

wherein the subscribe message identifies the user that is operating the client

20 computer and

wherein the message includes a request for that user's profile and

wherein the profile indicates how the computer should be conducting real-time communication over the network.

4. The method of claim 1, wherein the receiving step comprises receiving a document containing mark-up language text that includes the new required configuration settings.

5

5. The method of claim 1, wherein the configuration settings include the network address of the server computer that the client computer needs to contact in order to set up a real-time communication session.

10

6. The method of claim 1, wherein the transmitting step comprises:
inserting the new required configuration settings into a message
formatted according to a session initiation protocol; and
transmitting the message to the client computer.

15

7. The method of claim 6, wherein the inserting step comprises inserting into the message a block of mark-up language text that includes the new required configuration setting.

20

8. The method of claim 1, wherein the client computer is currently configured for real-time communication according to a set of old configuration settings, and wherein the transmitting step comprises transmitting to the client computer changes that are to be made to the old configuration settings in order to derive the new required configuration settings.

9. A method for configuring a client computer to engage in real-time communication on the computer network, wherein a user has logged onto the network via the client computer, the method comprising:

5 maintaining a profile for the user, wherein the profile comprises information as to how to configure the client computer to perform real-time communication on the network;

receiving, from a client program executing on the client computer, a message formatted according to a real-time communication protocol, wherein the message

10 includes a request for the profile; and

transmitting, over the computer network, at least part of the profile to the client computer.

10. A computer readable medium having stored thereon computer executable instructions for performing the method of claim 9.

11. The method of claim 9, wherein the information comprises settings that are to be used by the client computer in making an Internet telephony call.

20 12. The method of claim 9, wherein the information includes settings that are to be used by the client computer in making a video conference call.

THE GOVERNMENT OF THE
CANADA-MADE IN CANADA

13. The method of claim 9, wherein the information includes the name and network address of at least one real-time communication service provider.

14. The method of claim 8, further comprising inserting at least part of the
5 profile into a session initiation protocol message in the form of a block of mark-up language text, wherein the transmitting step comprises transmitting the session initiation protocol message to the client computer.

15. A system for facilitating real-time communication in a computer
10 network, the system comprising:

a client computer executing one or more programs for performing steps comprising engaging in real-time communication on the computer network;
at least one computer-readable medium having stored thereon a database, the database comprising configuration settings for allowing computers on the computer
15 network to conduct real-time communication;

a server computer communicatively linked to the client computer, the computer-readable medium being accessible by the server computer, the server computer executing one or more programs for performing steps comprising monitoring the database, detecting whether or not a configuration setting on the
20 database has changed to a new configuration setting, and in response to the detecting step, transmitting the new configuration setting to the client computer over the computer network,

wherein, in response to the transmitting step, the client computer uses the new setting to engage in real-time communication via the computer network

16. The system of claim 15, wherein the database is part of a directory
5 service having information as to the layout of the network, and wherein the configuration settings are based at least in part of the layout of the network.

17. The system of claim 15, wherein the one or more programs executing on the client computer perform further steps comprising transmitting a request for the 10 latest version of the configuration settings to the server computer.

18. The system of claim 15, wherein the configuration settings include the network address of a server that the one or more programs executing on the client should use to engage in real-time communication on the network.

15

19. The system of claim 15, wherein the one or more programs executing on the server computer perform further steps comprising:

generating a message formatted according to a session initiation protocol; and
including the new configuration setting within the message, and

20 wherein the transmitting step comprises transmitting the message to the client computer.

20. The system of claim 15, wherein the one or more programs executing
on the client computer perform further steps comprising generating a message
formatted according to a session initiation protocol;
5 inserting a request to obtain the new configuration setting into the message;
and transmitting the message to the server computer.

21. A method for configuring a client computer for real-time
communication on a computer network having a server computer, the method
comprising:

10 the client computer transmitting, to the server computer, a request for the
configuration settings that the client computer needs in order to engage in real-time
communication over the computer network;
the server computer responding to the request by transmitting, to the client
computer, a document containing the configuration settings; and
15 the client computer automatically reading the document and implementing the
configuration settings; and
the client computer engaging in real-time communication using the
implemented configuration settings.

20 22. The method of claim 21, further comprising:

the client computer receiving an email that includes a link to the
configuration document; and
the client computer activating the link in response to input from a user.

10001739-101203

23. The method of claim 21,

wherein the step of the server computer responding to the request
comprises the server computer transmitting, to the client computer, a configuration
5 document containing configuration settings required for the client computer to engage
in internet telephony,

wherein the step of the client computer automatically reading the
document and implementing the configuration settings comprises the client computer
reading the document and configuring itself to engage in internet telephony

10 wherein the step of the client computer engaging in real-time
communication comprises the client computer engaging in internet telephony using
the configuration settings.

24. The method of claim 21,

15 wherein the step of the client computer transmitting a request for the
configuration settings comprises the client computer transmitting, to the server
computer, a request for configuration settings that the client computer needs for the
purpose of regulating access to a user by certain other users

wherein the step of the server computer responding to the request
20 comprises the server computer transmitting, to the client computer, a configuration
document containing the configuration settings that the client computer needs to
regulate access to the user by certain other users.

25. A system for configuring a computer for real-time communication, the system comprising:

a client computer executing one or more programs for performing steps

comprising:

5 transmitting, to a server computer, a request for configuration settings required by the client computer to control real-time communication access to a user of the client computer;

receiving, from the server computer, a configuration document that contains the configuration settings, and

10 automatically reading the configuration document, implementing the configuration settings and controlling access to a user of the client computer based on the implemented configuration settings.

26. The system of claim 25

15 wherein the configuration document contains a list of users and an indication of the extent to which each of the users and groups of users is permitted to monitor the presence of the user of the client computer.

27. The system of claim 25, wherein the configuration document contains a

20 list of other users and groups of users and an indication of the extent to which each of the users and groups of users is permitted contact, via real time communication, the user of the client computer.

28. The system of claim 25, further comprising:
a server computer executing one or more programs performing steps
comprising:

communicating with the client computer according to a session

5 initiation protocol; and
transmitting to the client computer, the configuration document as part
of a message formatted according to the session initiation protocol.

29. The system of claim 25, further comprising:
a server computer executing one or more programs for performing
steps comprising:
receiving a first message from the client computer, the message
including the identity of a user of the client computer;
retrieving information as to the extent to which individuals or groups of
15 individuals are permitted to monitor the presence of the user on the computer network
and to contact the user via real-time communication;
transmitting the information to the client computer in the form of mark-up
language text as part of a second message formatted according to a session initiation
protocol;
20 wherein the one or more program executed by the client computer
perform further steps comprising:
transmitting the first message to the server computer in the form of a
session initiation protocol message.

30. A system for configuring a computer for real-time communication on a computer network, the system comprising

a means for generating, for transmission from a client computer to a

5 server computer, a request that the client computer be updated whenever configuration settings that are required by the client computer to engage in real-time communication have changed;

a means for monitoring conditions on the network to determine whether any changes have occurred that would require the client computer to have new 10 configuration settings in order to engage in real-time communication over the network; and

a means for generating for transmission from the server computer to the client computer, the new configuration settings as part of a protocol normally used by both the server computer and the client computer to structure real-time 15 communication between the client computer and computers with which the client computer communicates.

31. A method for configuring a program executing on a client computer for real-time communication on a computer network having a server computer, the

20 method comprising:

the program transmitting, to the server computer, a request for the configuration settings that the program needs in order to engage in real-time communication over the computer network;

2010 IEEE - All Rights Reserved

the server computer responding to the request by transmitting, to the program, a document containing the configuration settings; and

the program automatically reading the document and implementing the configuration settings; and

5 the program engaging in real-time communication using the implemented configuration settings.

32. A method for maintaining configuration settings required to engage in real-time communication over a computer network, the method comprising:

10 transmitting, to a server on the network, a request a request to be notified whenever changes are required to the configuration settings;

 receiving from the server computer, in response to the request, a document containing updates to the configuration settings;

 implementing the updates; and

15 engaging in real-time communication one the computer network using the implemented updates.

33. A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 32.

20

34. A network device executing one or more programs for performing the method of claim 32.

35. A network interface card having executing one or more programs for performing the method of claim 32.

36. A method for enabling a client computer to obtain an access control list, the client computer having at least one associated user, the access control list indicating the extent to which other users may contact the associated user, the method comprising:

transmitting, to a server on the network, a request a request to be notified whenever changes are made to the access control list;

10 receiving from the server computer, in response to the request, a document containing updates to the access control list;

implementing the updates; and
engaging in real-time communication one the computer network using the implemented updates.